



ePTFE Fiber

SOLUTIONS



ePTFE Fiber

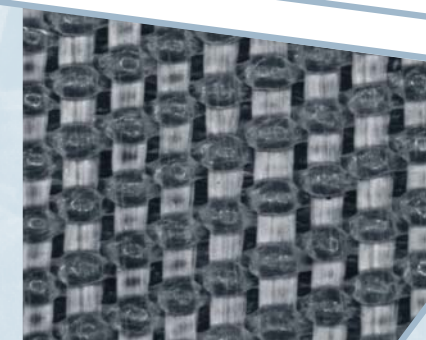
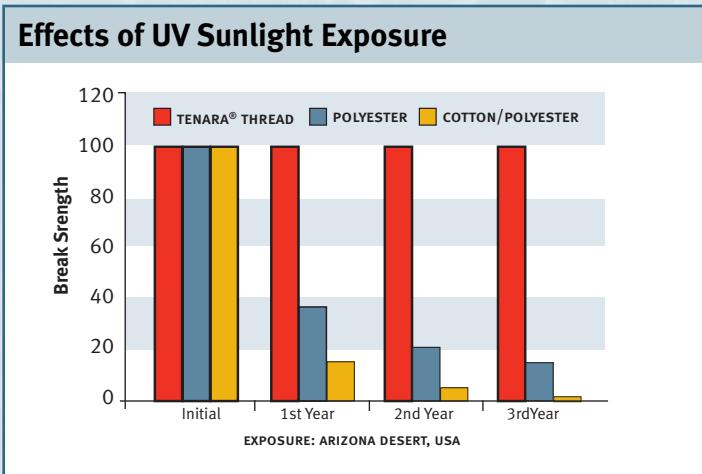
SOLUTIONS

Maximizing Performance in
the Harshest Environments

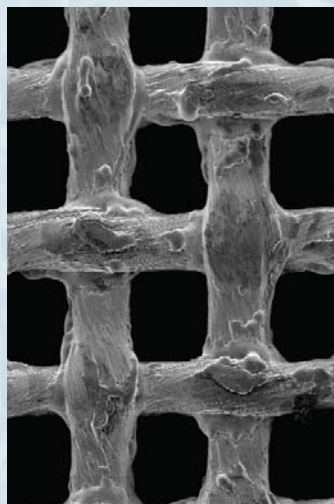
GORE™ ePTFE Fiber Properties	
Tenacity	up to 7 grams/denier (62cN/tex)
Tenacity at 200° C	up to 2.5 grams/denier (22cN/tex)
Modulus	50-8000 ksi
Density	0.2-2.2 grams/cc
Melting Point	340° C
Coefficient of Friction	0.01-0.04
Flex Endurance (MIT)	>10E6 cycles
Thermal Conductivity	0.1-0.3 W/mK
Thermal Conductivity (filled)	1.5 W/mK
Volume Resistivity (filled)	>1 Ohm-cm

GORE™ ePTFE Fiber Flame Resistant (FR) Properties	
Limiting Oxygen Index (LOI)	>95%
Vertical Flame Test (ASTM D6413)	PASS
Continuous Operating Temperature	260° C
Water Regain	0%

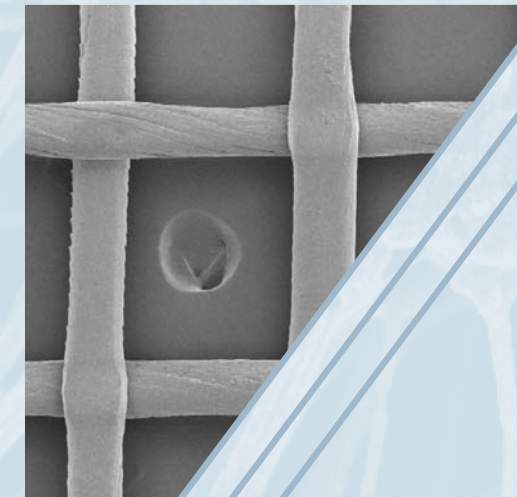
GORE™ ePTFE Fiber Capabilities	
Flat and Round Mono-filament	30 denier / 33 dtex and higher
Fibrillated	200 denier / 222 dtex and higher
“Staple” Fiber (dpf)	5 denier / 5.6 dtex and higher
Sewing Thread	>500 denier / >555 dtex
Round Fiber Diameter	45 microns and higher



PRECISION WOVEN FILTERS • MEMBRANE REINFORCEMENT • SUPPORT MESHES • ARCHITECTURAL FABRICS • HIGH PERFORMANCE ROPES



PRECISION WOVEN FILTERS • MEMBRANE REINFORCEMENT • SUPPORT MESHES • ARCHITECTURAL FABRICS



USA/Canada/Far East/Latin America/South America
W. L. GORE & ASSOCIATES, INC. • 100 Airport Road, PO Box 1010 • Elkton, MD 21921 • USA
Toll-Free: 1.800.276.8451 • Tel: +1.800.276.8451 • Fax: +1.410.506.8445

Europe/Middle East/Africa
W. L. GORE AND ASSOCIATES, GMBH • Wernher von Braun Strasse 18 • D-85640 Putzbrunn • GERMANY
Tel: 49.89.4612.0 • Fax: 49.89.4612.2300

China
W. L. GORE & ASSOCIATES (CHINA) LTD. • 43F, United Plaza • 1468 Nanjing Road West • Shanghai 200040 • CHINA
Tel: 86/21.6247.1999 • Fax: 86/21.6247.9199



gore.com/fibers
tenarafabric.com

Specifications are subject to change without notice.
GORE™, TENARA®, and design are trademarks of W. L. Gore & Associates, Inc. ©2009, W. L. Gore & Associates, Inc. Printed in the USA.

001.03.2009



ePTFE Fiber

SOLUTIONS

Advanced Performance through Revolutionary Fiber Technology

What is ePTFE?

GORE™ Fiber is composed of proprietary ePTFE – a uniquely designed fluoropolymer fiber – with a microporous structure and specific engineered physical qualities that transform products from the ordinary to the extraordinary.

Inherently, ePTFE has significant and distinctive properties:

	Gore ePTFE	PEEK	PPS	LCP	Para-Aramid	PBO	Meta-Aramid	UHMWPE	Polyester	Nylon	
Chemical Resistance (Acids)	Excellent	Good	Good	Good	Poor	Poor	Poor	Good	Poor	Poor	Unaffected by acids (pH 1-7). Ideal with highly corrosive materials such as concentrated nitric acid and sulfuric acids
Chemical Resistance (Bases)	Excellent	Excellent	Excellent	Good	Good	Poor	Poor	Good	Poor	Poor	Unaffected by bases (pH 8-14). Ideal material in complex chemical environments and aggressive chemical applications
UV Resistance	Excellent	Poor	Good	Poor	Poor	Poor	Poor	Good	Poor	Poor	Product properties unchanged by exposure to sun light, resistant to ultraviolet rays
High Thermal Resistance	Excellent	Excellent	Good	Good	Excellent	Excellent	Excellent	Poor	Poor	Poor	Stable product performance in extreme climates and temperatures, -180 °C to 260 °C
Low Flammability	Excellent	Excellent	Excellent	Excellent	Excellent	Excellent	Excellent	Poor	Poor	Poor	Inherently nonflammable; does not support flame (Reference protocol tests: Limiting Oxygen Index, UL94 Flame Test)
Hydrolysis Resistance (Hydrophobic)	Excellent	Good	Excellent	Good	Poor	Poor	Poor	Excellent	Good	Poor	Does not absorb water; woven products do not gain weight when wet, dry faster, and reduce the risk of scald burns
Abrasion Resistance	Excellent	Good	Poor	Excellent	Poor	Poor	Good	Excellent	Poor	Good	Withstands in-use frictional wear
Flex Fatigue	Excellent	Good	Poor	Poor	Poor	Poor	Poor	Excellent	Excellent	Excellent	Endures in-use repeated bending and flexing
Coefficient of Friction	Excellent	Good	Poor	Good	Poor	Good	Good	Good	Poor	Poor	Reduces friction between surfaces

Excellent Performance

Good Performance

Poor Performance

PEEK Polyetheretherketone

PPS Polyphenylene Sulfide

LCP Liquid crystal polymer

PBO Poly p-phenylene-2,6-benzobisoxazole

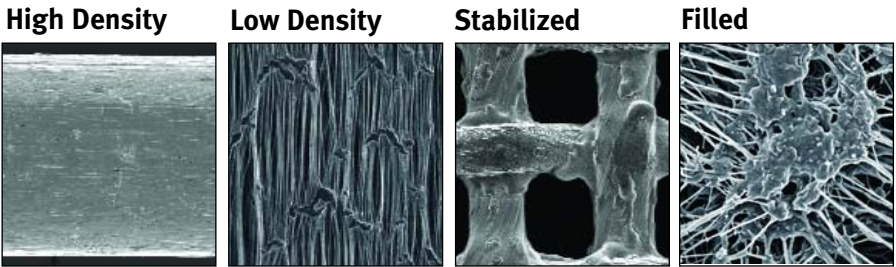
Results from internal testing and data analysis by W. L. GORE and Associates.

NEW GORE™ Fibers

GORE™ Fibers are engineered to offer exceptional performance in a range of challenging environments. With a thorough scientific understanding of fluoropolymers, Gore has developed the unique capability to modify the characteristics of a fiber to meet the specific demands of varied applications. As an example, a new, patent-pending technology enables stabilized 100% PTFE fabrics that offer consistent spacing control, excellent fray resistance and minimal shrinkage. We offer fibers that meet industry demands for fabrics that are stronger, tougher, more abrasion-resistant and retain tensile performance. We provide fibers that resist high temperatures and corrosive chemicals. We even have the ability to change the density or surface texture of a fiber while maintaining a 100% ePTFE structure.

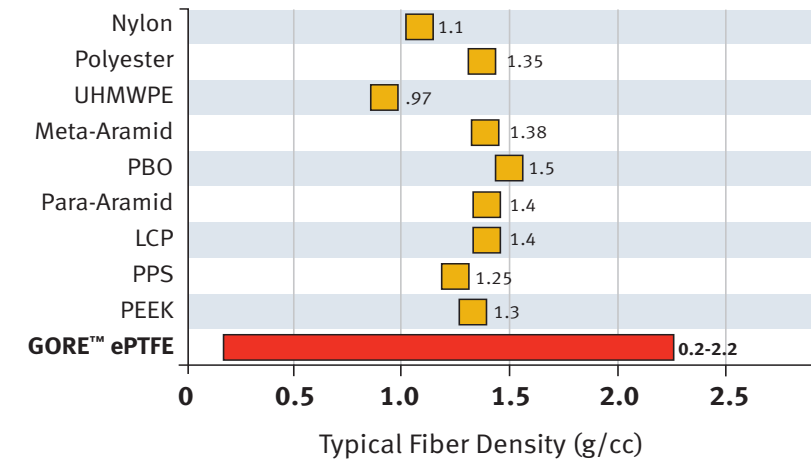
A unique combination of properties and the most comprehensive portfolio of product attributes make GORE™ Fibers the best choice for a wide variety of critical applications. Count on GORE™ Fibers for best-in-class performance.

Fiber Forms



GORE™ Fibers can be produced at a target density to make an ideal medium for additives such as catalysts, carbon, metals and pigments. New GORE™ Stabilized Fiber offers dimensional stability, low shrinkage and better filtration properties

Typical Fiber Density



Flex Endurance

